*START AND JUMP*

Materials -> one regular die (numbered 1 – 6) and a die numbered 4 – 9

This could be done as a whole class activity, in pairs, or individually.

Roll a number between 1 and 6. This will be the beginning number of the pattern you will create. Write it first on your paper. Roll a number using the die with numbers 4 – 9. This will be your jump number. Create a list of numbers using the jump number as the rule for your pattern. Continue your list until you reach 100. For example, if you roll a number 2 as your start number and a 5 as your jump number, your list will begin like this: 2, 7, 12, 17, 22, 27….. How many patterns can you find within this number list?

Standard: M05.B-O.2.1

Practice Standards: #3, #7

What visual(s) will you use? dice

What questions you will ask as students are engaged in the activity to surface the mathematics?

1. What is a jump number?
2. How many patterns can you find?
3. What are you noticing as you create your pattern?
4. How were you able to finish the pattern so quickly?
5. Do you notice any patterns by looking at the place values of the numbers?
6. Compare your pattern with another student’s/group’s pattern. Are the patterns similar? What is different about them?
7. What happens if you keep the jump number but change the start number? Are the patterns similar?
8. What happens if you keep the same start number but change the jump number? Are the patterns similar?
9. Do you notice the same patterns if you begin at 100 and subtract the jump number? Why are the numbers different or the same as your first list of numbers? Do you notice any patterns that you didn’t notice when you added?
10. Create a new list of numbers by rolling a new start number and two jump numbers. What patterns do you notice with this list? Was it more difficult or easier to find patterns in this list of numbers? Why do you think that?